

Acutely Increased Intraocular Pressure's Temporary Visual Distortions Reinforce Theory of Electro-Active Chemical Saturating All Nerve Fibers

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Introduction

Have you ever sneezed too hard and experienced a visual distortion that looks like a series of translucent dots moving in a figure-8 pattern?

Go to any optometrist and they will claim they have never heard of this before, but the truth is that this is a somewhat common phenomenon and they simply do not want to admit their ignorance to its cause.

Abstract

I propose that a momentary compression of the optic nerves wrings nerves out like a sponge (something I wrote about recently in my July 6th publication) causing an increase in the concentration of conductive chemicals around the periphery of nerves and a decrease at the core of the nerve fibers. Whereas actual damage to specific rods/cones in the eye would cause the perception of a fixed area of blindness, with this phenomenon, the affected area is merely distorted and the exact spot that is distorted rapidly fluctuates. It is worth noting, however, that these areas have a fixed center of gravity as they appear to move about the visual field. This is an important clue as to what is going on.

Where nerve compression in an ordinary nerve fiber in the skeletal muscle causes the sensation of warmth, in the optic nerve, this same action merely prevents data concerning signals from the eye from being conveyed properly to the brain.

On July 6, I speculated that perhaps the brain was using data regarding both the response time and the signal strength relative to the core/periphery of a nerve fiber to judge the source of a nerve impulse and in the case of pain sensations, this data conveys various sensations and types of pain.

With the optic nerves, the type of data needing to be related being different, the effects of varying types of damage to the nerves is quite different. Permanent damage can be caused by decreased blood flow or elevated glucose levels, however, the visual apparitions conjured by momentary surges in pressure would seem not to have any lasting associated effects. When pressure normalizes, the dispersion of the electro-chemical compound would seem to equalize as well.

It has been said that the eye is adept at noticing motion and that motion in the periphery of the visual field is signalled more efficiently to the brain than changes in the center of the visual field. One of the functions of the optic nerves, in addition to conveying visual data in terms of contrast and color, is to herald any per se changes to the sensory input. Signalling that there is a change may be more important, at least initially, than signalling what that

change consists of. Where the rods and cones of the eye are only capable of relaying observed data, the nerves are capable of selective amplification of signals, particularly those relating to changes to a signal.

We can make a number of deductions from the fact that these aberrations are transparent (they do not actually prevent the perception of what is "behind them") and that they are in constant motion.

I propose that what it is that we are seeing when we see motion out of the corner of our eye is actually one of these "dancing spheres" seen during momentary surges in intraocular pressure. This is the nervous system's built-in default alarm system to relay information concerning changes to the visual field. By increasing the pressure exerted on all nerves simultaneously, all visual data is "earmarked" as being new and dynamical when it is, in fact, static. This signalling is based upon the presence of increased levels of an electro-chemical substance caused by the compression of the nerves. Under normal conditions, such as when there is an authentic change to what is perceived in the peripheral visual field, the increase is instead driven by the flow of electrons through the nerve, drawing that same unidentified chemical out toward the outside of individual nerve fibers electrostatically.

When all data coming into the brain from the optic nerve is earmarked as "new" when, in fact, it is the same, static input, the occipital lobe of the brain becomes confused and introduces these moving spheres which have the attributes of transparency, a thin, black outline/shadow around their circumference, and the quality of constant motion in all directions, meant to be maximally, "attention getting." This sort of built in alarm system is not dissimilar from the phenomenon of hearing a frightening sound in a dream being the brain's way of waking us up to keep us out of danger.

Conclusion

These are both examples of something that has barely been studied at all: Sophisticated illusions generated by the mind in order to increase the chances of survival; mechanisms that must ultimately be genetically conferred and evolved over many tens or hundreds of thousands of years.